

## CLAIMS

What is claimed is:

1. A refrigerator, comprising:
  - a cabinet defining a storage compartment therein;
  - a machine room defined at a top of the cabinet;
  - a main intake vent, located at an upper surface of the machine room; and
  - a main exhaust vent, located at an upper surface of the machine room, wherein;the main intake vent and the main exhaust vent are located so as to allow air to circulate through the machine room.
2. The refrigerator according to claim 1, wherein the machine room further comprises:
  - a compressor;
  - a condenser; and
  - a cool air circulation fan, wherein;the main intake vent, the condenser, the cool air circulation fan, the compressor, and the main exhaust vent are positioned sequentially along an air flow path.
3. The refrigerator according to claim 1, wherein the machine room is horizontally and longitudinally defined along a front portion of the top of the cabinet, with the main intake vent and the main exhaust vent provided side-by-side at the upper surface of the machine room.
4. The refrigerator according to claim 2, wherein the machine room further comprises:
  - a noise buffering plate, to divide the machine room into a front chamber and a rear chamber;
  - the noise buffering plate having a plurality of vent holes to allow air flow between the front chamber and the rear chamber.
5. The refrigerator according to claim 4, wherein the vent holes are formed through the noise buffering plate such that groups of the vent holes are formed respectively at each side of the noise buffering plate so as to correspond to the main intake vent and the main exhaust

vent.

6. The refrigerator according to claim 4, wherein the front chamber further comprises a partition plate to divide the front chamber into a front intake chamber and a front exhaust chamber.

7. The refrigerator according to claim 6, wherein;  
the main intake vent is located over the front intake chamber, and  
the main exhaust vent is located over the front exhaust chamber.

8. The refrigerator according to claim 4, wherein the condenser, the cooling fan and the compressor are sequentially arranged in the rear chamber of the machine room with the condenser being proximate to the main intake vent, and the compressor being proximate to the main exhaust vent.

9. The refrigerator according to claim 7, wherein the main intake vent, the front intake chamber, a first set of the vent holes, the condenser, the cool air circulation fan, the compressor, a second set of the vent holes, the front exhaust chamber, and the main exhaust vent are positioned sequentially along an air flow path.

10. The refrigerator according to claim 1, further comprising a sub-intake vent and a sub-exhaust vent respectively provided at both side edges of the upper surface of the machine room to accomplish an auxiliary circulation of air through the machine room.

11. The refrigerator according to claim 2, further comprising a sub-intake vent and a sub-exhaust vent respectively provided at both side edges of the upper surface of the machine room to accomplish an auxiliary circulation of air through the machine room.

12. A refrigerator, comprising:  
a cabinet defining a storage compartment therein;  
a machine room defined at a top of the cabinet, comprising  
a compressor,  
a condenser,  
a cool air circulation fan, and

a noise buffering plate, to partition the machine room into a front chamber and a rear chamber, the noise buffering plate having a plurality of vent holes to allow air flow between the front chamber and the rear chamber;

a partition plate, dividing the front chamber into a front intake chamber and a front exhaust chamber;

a main intake vent, located at an upper surface of the front intake chamber;

a main exhaust vent, located at an upper surface of the front exhaust chamber;

and

a sub-intake vent and a sub-exhaust vent respectively provided at both side edges of the upper surface of the machine room to accomplish an auxiliary circulation of air through the machine room.

13. The refrigerator according to claim 12, wherein the vent holes are arranged into a first vent hole group and a second vent hole group;

the first vent hole group being positioned between the front intake chamber and the rear chamber; and

the second vent hole group being positioned between the front exhaust chamber and the rear chamber.

14. The refrigerator according to claim 13, wherein, by the force of the cool air circulation fan, cooling air;

is drawn through the main intake vent into the front intake chamber,

passes through the noise buffering plate by way of the first vent hole group and into the rear chamber,

cools the condenser,

passes through the cool air circulation fan,

cools the compressor,

passes through the noise buffering plate by way of the second vent hole group and into the front exhaust chamber, and

exits the machine room by way of the main exhaust vent.

15. A refrigerator, comprising:

a cabinet defining a storage compartment therein; and

a machine room, comprising;

a compressor,  
a condenser,  
a cool air circulation fan, and  
a noise buffering plate;

the noise buffering plate positioned in the machine room so as to dampen operational noise from the compressor, condenser, and cool air circulation fan.

16. The refrigerator according to claim 15, wherein the noise buffering plate further comprises a plurality of vent holes to allow air circulation in the machine room.

17. The refrigerator of claim 16, further comprising a main intake vent and a main exhaust vent located so as to allow air to circulate through the machine room.

18. The refrigerator according to claim 15, wherein the noise buffering plate is positioned to divide the machine room into a front chamber and a rear chamber.

19. The refrigerator according to claim 17, wherein the compressor, the condenser, and the cool air circulation fan are separated from the main intake vent and the main exhaust vent by the noise buffering plate, so as to limit operational noise transmission to an outside of the cabinet.

20. The refrigerator of claim 17, wherein the main intake vent and the main exhaust vent are located on an upper side of the cabinet so as to give the refrigerator a pleasant front appearance.